REMARKS

Claims 1, 2, 4, 23 and 25-30 are pending in this application. Claim 25 has been amended, claim 31 has been added and claim 26 has been canceled without prejudice by the present Amendment. Amended claim 25 and new claim 31 do not introduce any new subject matter.

REJECTIONS UNDER 35 U.S.C. § 112

The Examiner objects to claim 26, stating that the limitation "the second upper electrode" lacks antecedent basis. In response, Applicants have corrected the lack of antecedent basis by canceling claim 26 and rewriting claim 26 in the form of new claim 31, which is dependent on claim 27.

Accordingly, Applicants respectfully request that the Examiner withdraw the objection to claim 26.

REJECTIONS UNDER 35 U.S.C. § 103

Reconsideration is respectfully requested of the rejection of claims 1, 2, 4, 23, 25 and 27-30 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,238,964 ("Cho") in view of U.S. Patent No. 6,303,490 ("Jeng").

Applicants maintain that Cho, when taken alone or in combination with Jeng, does not disclose or suggest the first upper electrode formed by physical vapor deposition without bias power applied to the semiconductor substrate, as recited in amended claims 1 and 23, or the first upper electrode formed by physical vapor deposition without bias power applied to the semiconductor substrate to form the first upper electrode on a sidewall of the concave hole, as recited in amended claim 25. Further, Applicants respectfully submit that it would not have been obvious to modify Cho in view of Jeng to

develop same.

Cho and Jeng Do Not Disclose Or Suggest The First Upper Electrode Formed By PVD Without Bias Power Applied To The Substrate

The claimed embodiments recite a double-layered upper electrode comprising one electrode (*i.e.*, the first upper electrode) formed by physical vapor deposition (PVD) and another electrode (*i.e.*, the second upper electrode) formed by chemical vapor deposition (CVD) or CVD or atomic layer deposition (ALD).

Referring to, for example, Fig. 2 of Applicants' disclosure, the first upper electrode 134a formed by PVD is a single layer formed with no bias power applied to the substrate in order to deposit a PVD layer reasonably thick on the sidewall of a concave hole.

As admitted by the Examiner, Cho fails to teach the first upper electrode formed by PVD without bias power applied to semiconductor substrate, and relies on Jeng to cure the deficiency in Cho. See December 30, 2005 Office Action at 3.

However, unlike the claimed embodiments, Jeng discloses a double-layered film 140 formed by PVD that is formed both with and without wafer bias, wherein layer 140a is formed with wafer bias and layer 140b is formed without wafer bias. Therefore, Jeng teaches a two-step PVD process that requires application of wafer bias in one step and no bias in the other step. Indeed, Jeng encourages the application of wafer bias by stating that it provides better step coverage. See, e.g., Jeng, Abstract and col. 4, lines 19-22. Accordingly, upon reading Jeng, one of ordinary skill in the art would not be motivated to form the claimed single layer PVD electrode that is formed only without bias power applied to the substrate.

Therefore, the combination of Cho and Jeng fails to suggest the first upper electrode formed by physical vapor deposition without bias power applied to the

semiconductor substrate, as recited in claims 1, 23 and 25.

As such, Applicants respectfully submit that claims 1, 23 and 25 are patentable over Cho in view of Jeng. In addition, for at least the reason that claims 2, 4 and 28 depend from claim 1, claim 29 depends from claim 23, and claims 27 and 30 depend from claim 25, claims 2, 4 and 27-30 are also submitted to be patentable over the cited references.

Accordingly, Applicants respectfully request that the Examiner withdraw the rejection of claims 1, 2, 4, 23, 25 and 27-30 under 35 U.S.C. § 103(a) and that claims 1, 2, 4, 23, 25 and 27-30 are in condition for allowance.

Reconsideration is respectfully requested of the rejection of claim 26 under 35 U.S.C. § 103(a) as being unpatentable over Cho in view of Jeng as applied to claims 1, 2, 4, 23 and 25, and further in view of U.S. Patent No. 6,461,914 ("Roberts").

As stated above, Applicants have canceled claim 26 and have rewritten claim 26 as new claim 31, which depends from claim 27. Therefore, Applicants respectfully request that the Examiner withdraw the rejection of claim 26 under 35 U.S.C. § 103(a).

Nevertheless, Applicants respectfully submit that new claim 31 is patentable over the cited references, at least by virtue of claim 31's dependency on claim 25.

Applicants respectfully submit that Cho, when taken alone or in combination with Jeng and/or Roberts, does not disclose or suggest the first upper electrode formed by physical vapor deposition without bias power applied to the semiconductor substrate to form the first upper electrode on a sidewall of the concave hole, as recited in amended claim 25.

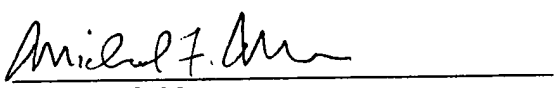
As stated above, Cho and Jeng do not disclose or suggest the first upper

electrode formed by physical vapor deposition without bias power applied to the semiconductor substrate. Further, Applicants respectfully submit that the claimed feature is not rendered obvious by the addition of Roberts, since Roberts does not address the claimed application of bias power.

Therefore, Applicants respectfully submit that claim 25 is patentable over Cho in view of Jeng as applied to claims 1, 2, 4, 23 and 25, and further in view of Roberts. In addition, for at least the reason that new claim 31 depends from claim 25, new claim 31 is also submitted to be patentable over the cited references.

An early and favorable reconsideration is earnestly solicited. If the Examiner has any further questions or comments, the Examiner may telephone Applicants' Attorney to reach a prompt disposition of this application.

Respectfully submitted,



Michael F. Morano
Reg. No. 44,952
Attorney for Applicants

F. CHAU & ASSOCIATES, LLC
130 Woodbury Road
Woodbury, NY 11797
(516) 692-8888